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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/080,454	02/21/2002	Weishi Feng	MP0133	9962

26703 7590 09/07/2006

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EXAMINER	
LEE, ANDREW CHUNG CHEUNG	
ART UNIT	**PAPER NUMBER**
2616	

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/080,454	FENG ET AL.	
	Examiner	Art Unit	
	Andrew C. Lee	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1 – 9, 12 – 21, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ward (US 6754170 B1) and Ho et al. (US 6950397 B1) in further view of Sorrells et al. (US 7054296 B1).

Regarding claims 1, 13, Ward discloses the limitation of a method for providing advanced signal processing in a wireless local area network (column 2, lines 3 – 41, Fig. 2) comprising: transmitting a header using a first transceiver (Fig. 2, column 7, lines 50 – 56); specifying a first data field in said header that enables said advanced signal processing (recited "the signal field (as a first data field in said header) is convolution encoded rate ½ BPSK-OFDM modulated (as said advanced signal processing)" as a first data field in said header that enables said advanced signal processing; Fig. 3A, column 8, lines 51 – 58); Ward does not disclose expressly that advanced signal processing in a wireless local area network that requires an interframe period between data and an acknowledgement for compatibility, wherein a duration of said interframe period is shorter than a duration that is required to perform said advanced signal processing. Ho et al. disclose the limitation of advanced signal processing in a wireless

local area network that requires an interframe period between data and an acknowledgement for compatibility, wherein a duration of said interframe period is shorter than a duration that is required to perform said advanced signal processing (Fig. 10, elements SIFS, B; column 21, lines 29 – 47). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ward to include an advanced signal processing in a wireless local area network that requires an interframe period between data and an acknowledgement for compatibility, wherein a duration of said interframe period is shorter than a duration that is required to perform said advanced signal processing such as that taught by Ho et al. in order to provide a technique for transforming a WLAN into part of an end-to-end QoS network having enhanced channel access, thereby providing QoS support with improved bandwidth utilization (as suggested by Ho et al., see column 2, lines 34 – 37). Ward teaches specifying a second data field (cited as length field) that defines a data in number of octets in the PSDU (column 8, lines 58 – 59). Ward and Ho et al. do not disclose explicitly specifying a second data field that defines a data time period and an extension time period. Sorrells et al. disclose the limitation of specifying a second data field that defines a data time period and an extension time period (recited "the length field (as a second data field) is an unsigned 16-bit integer that indicates the number of microseconds necessary to transmit the PSDU" as specifying a second data field that defines a data time period, and "bit-7 of the service field is used with the length field to determine the time in microseconds from the number of octets contained in the length field" as an extension time period; column 120, lines 15 – 29). It would have been

obvious to one of ordinary skill in the art at the time the invention was made to modify Ward and Ho et al. to include specifying a second data field that defines a data time period and an extension time period such as that taught by Sorrells et al. in order to provide frequency translation, and applications of same, such as, but not limited to wireless local area networks (WLANs) (as suggested by Sorrells et al., see column 1, lines 62 – 64).

Regarding claims 2, 14, Ward discloses the limitation of the method of claimed wherein said first data field is a signal portion of said header (recited "the signal field (as a first data field in a signal portion of said header) is convolution encoded rate ½ BPSK-OFDM modulated" as said first data field is a signal portion of said header; column 8, lines 51 – 58).

Regarding claims 3, 15, Ward discloses the limitation of the method of claimed wherein said second data field is a length portion of said header (recited "length field" as said second data field (cited as length field) is a length portion of said header; column 8, lines 58 – 59).

Regarding claims 4, 16, Ward discloses the limitation of the method of claim ed further comprising transmitting data after said header during said data time period column 8, lines 60 – 66; column 9, lines 1 –2).

Regarding claims 5, 17, Ward discloses the limitation of the method of claimed further comprising transmitting dummy data during said extension time period (Fig. 3A, element "Pad bits", column 8, lines 60 – 66; column 9, lines 1 – 7).

Regarding claims 6, 18, Ward disclose the limitation of the method of claimed further comprising receiving said header portion at a second transceiver that is located remotely from said first transceiver (Fig. 1, elements 15, column 6, lines 40 – 42;).

Regarding claims 7, 19, Ward disclose the limitation of the method of claimed further comprising initiating receiver processing including said advanced signal processing during said extension time period (column 8, lines 33 – 40; lines 60 – 66; Fig.3A, Pad bits).

Regarding claims 8, 20, Ward discloses the limitation of the method of claimed wherein said advanced signal processing includes advanced error coding (Fig. 2, column 7, lines 50 – 56).

Regarding claims 9, 21, Ward disclose the limitation of the method of claimed wherein said advanced signal processing includes at least one of Turbo coding, Reed-Solomon coding, and convolution coding (column 8, lines 30 – 32).

Regarding claims 12, 24, Ward discloses the limitation of the method of claimed wherein said interframe period is specified by at least one of IEEE section 802.11, 802.11(a) and 802.11(b) (column 1, lines 38 – 48).

3. Claims 10, 11, 22, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ward (US 6754170 B1), Ho et al. (US 6950397 B1) and Sorrells et al. (US 7054296 B1) as applied to claims 1 – 9, 12 – 21, 24 above, and further in view of Applicant's Admitted Prior Art – Specification, Paragraphs [0009], [0010], Page 3, Fig 7.

Regarding claims 10, 22, Ward, Ho et al. and Sorrells et al. do not disclose expressly the limitation of the method of claimed wherein said interframe period includes time allocated for receiver delay, receiver processing delay, media access control delay, and receiver/transmitter transition delay. Applicant's Admitted Prior Art discloses the limitation claimed wherein said interframe period includes time allocated for receiver delay, receiver processing delay, media access control delay, and receiver/transmitter transition delay (Paragraphs [0009], [0010], Page 3, Fig 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ward to include a 0claimed wherein said interframe period includes time allocated for receiver delay, receiver processing delay, media access control delay, and receiver/transmitter transition delay such as that disclosed/taught by Applicant's Admitted Prior Art in order to provide a wireless local area network (WLAN) with first

and second WLAN transceivers that have advanced signal processing capabilities (as suggested by Applicant's admitted Prior Art, see [0012], page 4, lines 1 – 3).

Regarding claims 11, 23, Ward disclose the limitation of the method of claimed wherein a time period for said receiver delay and said receiver processing delay are increased by said extension time period (column 4, lines 15 – 21; column 8, lines 33 – 40).

Response to Arguments

4. Applicant's arguments filed on 5/31/2006 with respect to claims 1 – 24 have been fully considered but they are not persuasive.

Regarding claim 1, Applicant argues reference Ward, either singly or in combination with Ho, do not show, teach, or suggest specifying a first data field in said header that enables advanced signal processing and specifying a second data field that defines a data time period and an extension time period. Examiner contends reference Ward does disclose explicitly specifying a first data field in said header that enables advanced signal processing (the signal field is convolution encoded rate ½ BPSK-OFDM modulated as specifying a first data field in said header that enables advanced signal processing, see Fig. 3A, column 8, lines 51 – 58). However, Ward does not disclosed impliedly and specifying a second data field that defines a data time period and an extension time period. The reference Sorrells cited disclose the limitation of specifying a second data field that defines a data time period and an extension time

period ("indicates the number of microseconds necessary to transmit the PSDU" see column 120, lines 15 – 29).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ACL Aug 24, 2006

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